

## SERVICE MANUAL Level 1&2

# NOKIA 5530 XpressMusic

RM-504



### Transceiver characteristics

#### Band:

GSM/EDGE 850/900/1800/1900

#### Display:

Touch screen (Full touch UI) nHD (640\*360px),  
2.9"/active area, 36.18mm x 64.32 mm colour display,  
up to 16M colours  
Automatic orientation sensor for display rotation

#### Camera:

3.2 Mpix, 4 x digital zoom

#### Operating System:

Series 60 release Taco 5.0

#### Connections:

- Bluetooth 2.0 (A2DP/AVRCP)
- 2.0 Charger connector
- USB 2.0 high speed through micro-USB interface
- 3.5 mm Nokia AV connector
- Micro SD card (hot swap)

Transceiver with BL-4U battery pack

Talk time	Standby	Note
<b>GSM:</b> Up to 4.9 hours	<b>GSM:</b> Up to 351 hours	Talk times are dependent on network parameters and phone settings

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## 1. CHANGE HISTORY

Status	Version No.	Date	Comments
Approved	1.0	28.5.2009	
Approved	2.0	17.6.2009	Assembly screw order updated, Exploded view updated
Approved	3.0	31.8.2009	Exploded view updated
Approved	4.0	17.12.2009	Exploded view updated
Approved	5.0	17.2.2010	Exploded view and disassembly sequence updated
Approved	6.0	25.2.2010	Exploded view updated
Approved	7.0	24.3.2010	S2500 component position in solder components corrected

The purpose of this document is to help NOKIA service levels 1 and 2 workshop technicians to carry out service to NOKIA products. This Service Manual is to be used only by authorized NOKIA service suppliers, and the content of it is confidential. Please note that NOKIA provides also other guidance documents (e.g. Service Bulletins) for service suppliers, follow these regularly and comply with the given instructions.

While every endeavor has been made to ensure the accuracy of this document, some errors may exist. If you find any errors or if you have further suggestions, please notify NOKIA using the address below:

**Nokia Care Academy**  
[service.manuals@nokia.com](mailto:service.manuals@nokia.com)

Please keep in mind also that this documentation is continuously being updated and modified, so watch always out for the newest version.

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The availability of particular products may vary by region.

### **IMPORTANT**

This document is intended for use by qualified service personnel only.

### 3. WARNINGS AND CAUTIONS

Please refer to the phone's user guide for instructions relating to operation, care and maintenance including important safety information. Note also the following:

#### 3.1 Warnings

1. CARE MUST BE TAKEN ON INSTALLATION IN VEHICLES FITTED WITH ELECTRONIC ENGINE MANAGEMENT SYSTEMS AND ANTI-SKID BRAKING SYSTEMS. UNDER CERTAIN FAULT CONDITIONS, EMITTED RF ENERGY CAN AFFECT THEIR OPERATION. IF NECESSARY, CONSULT THE VEHICLE DEALER/MANUFACTURER TO DETERMINE THE IMMUNITY OF VEHICLE ELECTRONIC SYSTEMS TO RF ENERGY.
2. THE HANDPORTABLE TELEPHONE MUST NOT BE OPERATED IN AREAS LIKELY TO CONTAIN POTENTIALLY EXPLOSIVE ATMOSPHERES, EG PETROL STATIONS (SERVICE STATIONS), BLASTING AREAS ETC.
3. OPERATION OF ANY RADIO TRANSMITTING EQUIPMENT, INCLUDING CELLULAR TELEPHONES, MAY INTERFERE WITH THE FUNCTIONALITY OF INADEQUATELY PROTECTED MEDICAL DEVICES. CONSULT A PHYSICIAN OR THE MANUFACTURER OF THE MEDICAL DEVICE IF YOU HAVE ANY QUESTIONS. OTHER ELECTRONIC EQUIPMENT MAY ALSO BE SUBJECT TO INTERFERENCE.

#### 3.2 Cautions

1. Servicing and alignment must be undertaken by qualified personnel only.
2. Ensure all work is carried out at an anti-static workstation and that an anti-static wrist strap is worn.
3. Use only approved components as specified in the parts list.
4. Ensure all components, modules screws and insulators are correctly re-fitted after servicing and alignment.
5. Ensure all cables and wires are repositioned correctly

#### 4. ESD PROTECTION

Nokia requires that service points have sufficient ESD protection (against static electricity) when servicing the phone.



Any product of which the covers are removed must be handled with ESD protection. The SIM card can be replaced without ESD protection if the product is otherwise ready for use.

To replace the covers ESD protection must be applied.

All electronic parts of the product are susceptible to ESD. Resistors, too, can be damaged by static electricity discharge.

All ESD sensitive parts must be packed in metallized protective bags during shipping and handling outside any ESD Protected Area (EPA).

Every repair action involving opening the product or handling the product components must be done under ESD protection.

ESD protected spare part packages **MUST NOT** be opened/closed out of an ESD Protected Area.

For more information and local requirements about ESD protection and ESD Protected Area, contact your local Nokia After Market Services representative.

## 5. CARE AND MAINTENANCE

This product is of superior design and craftsmanship and should be treated with care. The suggestions below will help you to fulfil any warranty obligations and to enjoy this product for many years.

- Keep the phone and all its parts and accessories out of the reach of small children.
- Keep the phone dry. Precipitation, humidity and all types of liquids or moisture can contain minerals that will corrode electronic circuits.
- Do not use or store the phone in dusty, dirty areas. Its moving parts can be damaged.
- Do not store the phone in hot areas. High temperatures can shorten the life of electronic devices, damage batteries, and warp or melt certain plastics.
- Do not store the phone in cold areas. When it warms up (to its normal temperature), moisture can form inside, which may damage electronic circuit boards.
- Do not drop, knock or shake the phone. Rough handling can break internal circuit boards.
- Do not use harsh chemicals, cleaning solvents, or strong detergents to clean the phone.
- Do not paint the phone. Paint can clog the moving parts and prevent proper operation.
- Use only the supplied or an approved replacement antenna. Unauthorised antennas, modifications or attachments could damage the phone and may violate regulations governing radio devices.

All of the above suggestions apply equally to the product, battery, charger or any accessory.

## 6. BATTERY INFORMATION

Note: A new battery's full performance is achieved only after two or three complete charge and discharge cycles! The battery can be charged and discharged hundreds of times but it will eventually wear out.

When the operating time (talk-time and standby time) is noticeably shorter than normal, it is time to buy a new battery. Use only batteries approved by the phone manufacturer and recharge the battery only with the chargers approved by the manufacturer.

Unplug the charger when not in use. Do not leave the battery connected to a charger for longer than a week, since overcharging may shorten its lifetime.

If left unused a fully charged battery will discharge itself over time. Temperature extremes can affect the ability of your battery to charge.

For good operation times with Ni-Cd/NiMH batteries, discharge the battery from time to time by leaving the product switched on until it turns itself off (or by using the battery discharge facility of any approved accessory available for the product).

Do not attempt to discharge the battery by any other means. Use the battery only for its intended purpose.

Never use any charger or battery which is damaged.

Do not short-circuit the battery. Accidental short-circuiting can occur when a metallic object (coin, clip or pen) causes direct connection of the + and - terminals of the battery (metal strips on the battery) for example when you carry a spare battery in your pocket or purse. Shortcircuiting the terminals may damage the battery or the connecting object.

Leaving the battery in hot or cold places, such as in a closed car in summer or winter conditions, will reduce the capacity and lifetime of the battery. Always try to keep the battery between 15°C and 25°C (59°F and 77°F).

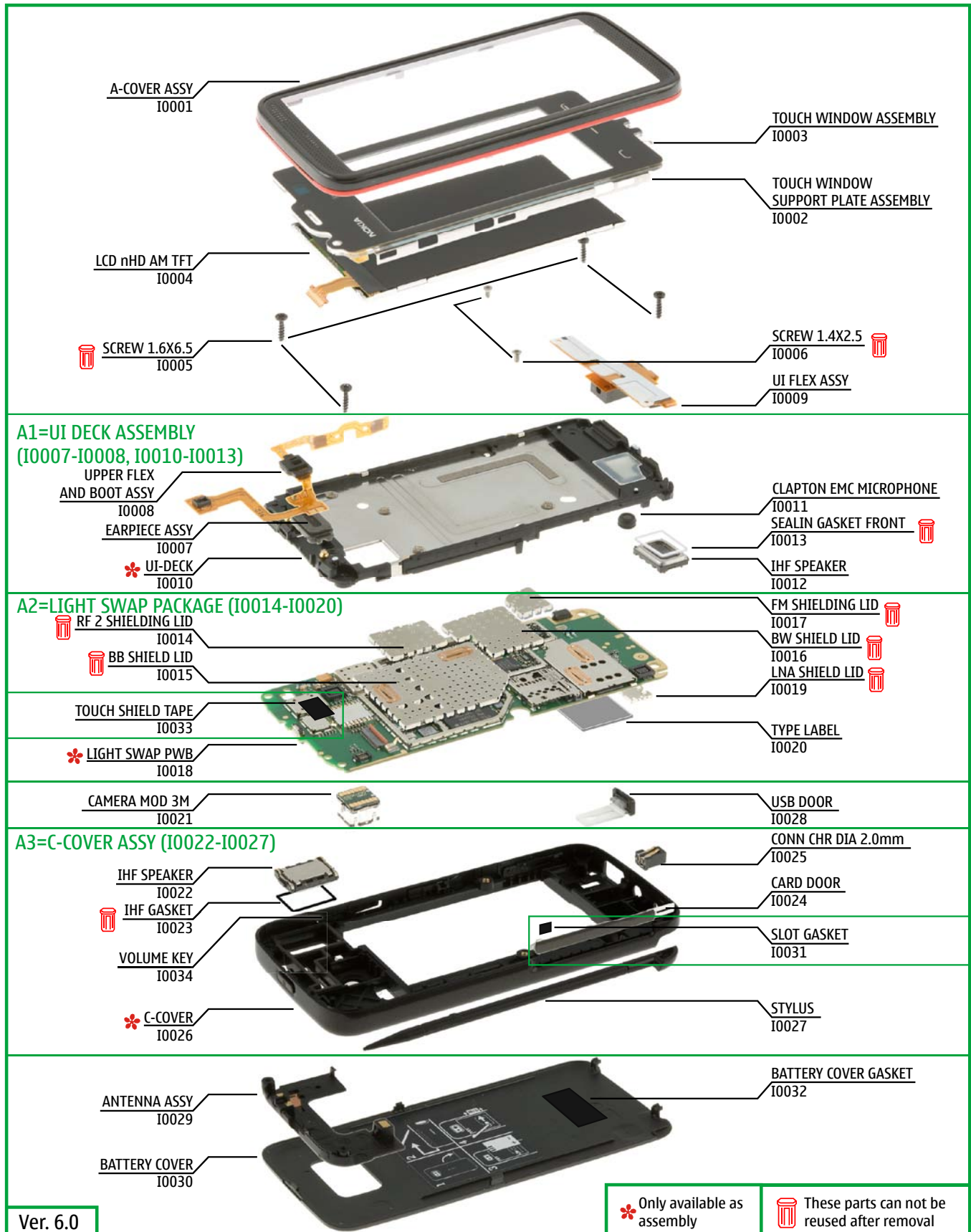
A phone with a hot or cold battery may temporarily not work, even when the battery is fully charged. Batteries' performance is particularly limited in temperatures well below freezing.

Do not dispose batteries in a fire! Dispose of batteries according to local regulations (e.g. recycling).

Do not dispose as household waste.



## 7. EXPLODED VIEW



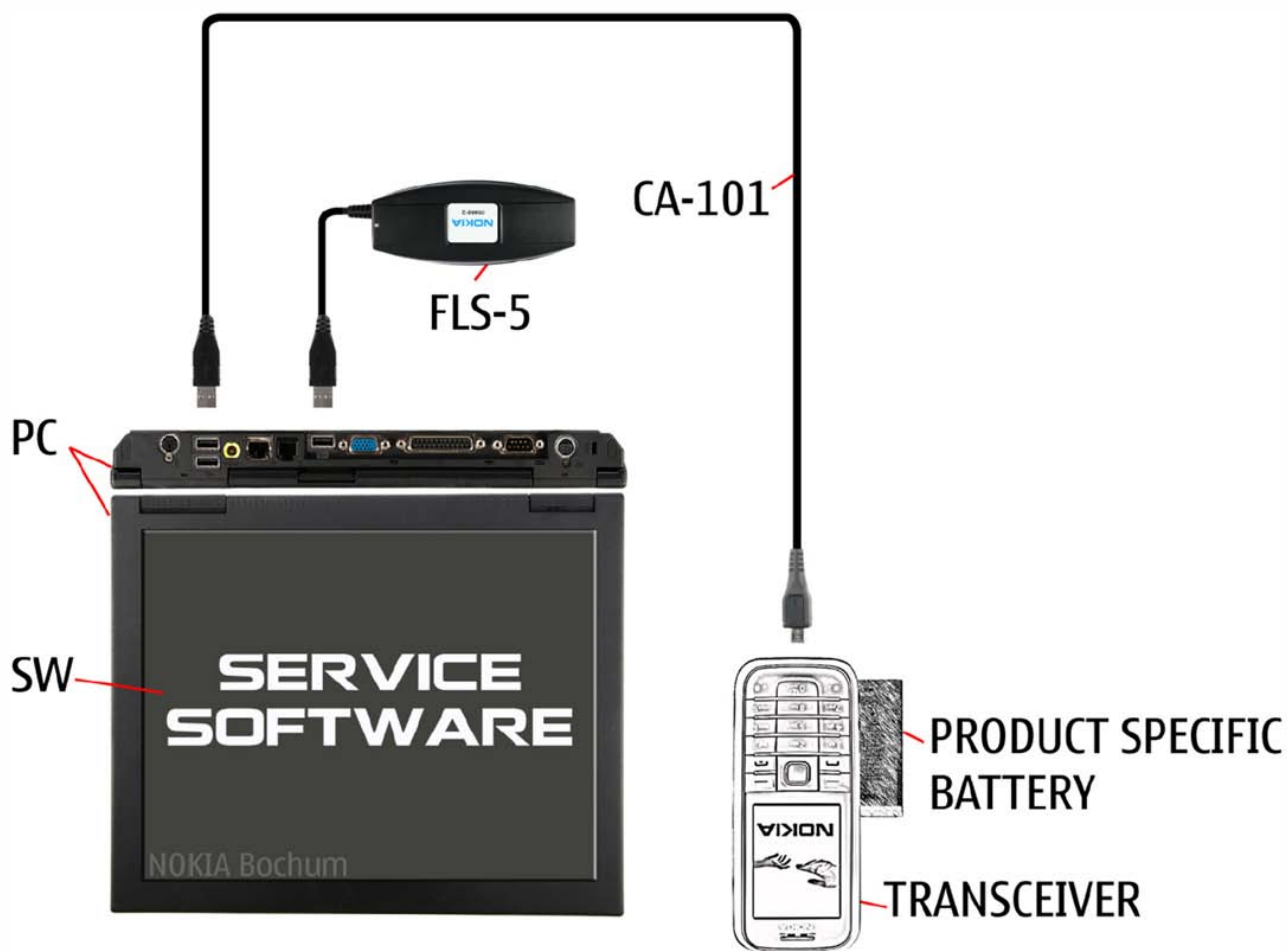
## 8. SERVICE DEVICES

 <p>FLS-5</p> <p>FLS-5 Flash Device</p>	 <p>CA-101 100cm</p> <p>CA-101 Service Cable</p>	 <p>AC-3 Travel Charger</p>
 <p>BL-4U</p> <p>BL-4U Battery</p>	 <p>V2.0 V3.0</p> <p>SS-210 v2.0/3.0 Camera removal tool</p>	 <p><b>NMP standard toolkit (v2)</b> For more information, refer to the Service Bulletin (SB-011) on NOKIA Online. Supplier or manufacturer contacts for tool re-order can be found in "Recommended service equipment" document on NOKIA Online.</p>

## 9. SW-UPDATE

### Flash concept (Point of Sales)

To use the FLS-5 Flash Dongle, follow the user guide inside the sales package.  
Please check always for the latest version of flash software, which is available on Nokia Online.



## 10. DISASSEMBLY INSTRUCTIONS



1) Nokia 5530 XpressMusic disassembly.



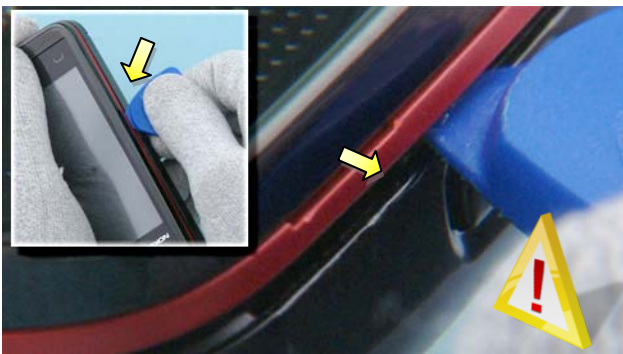
2) You must use the Nokia Standard Toolkit version 2. You will also need the SS-210 v2.0/3.0 camera removal tool, AV plug and the 2 mm charger plug.



3) To remove the BATTERY COVER, use the finger groove to release the cover. If there is a battery inserted, remove it also.



4) Protect the camera lens with protective film.



4) Start releasing the A-COVER from the card door area. Insert the SRT-6 between the covers and slide it around the phone. Be careful not to damage the A-COVER edges!



6) Remove the A-COVER. Make sure the speaker mesh stays in its place underneath the cover.

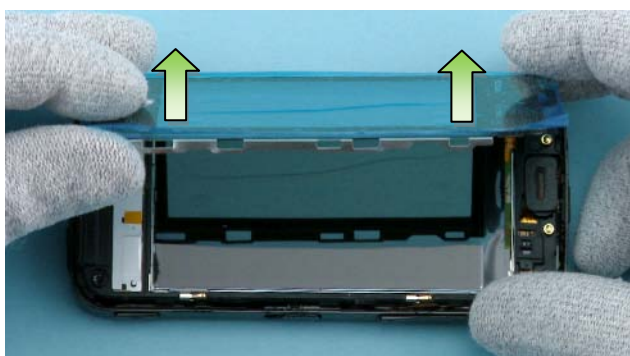




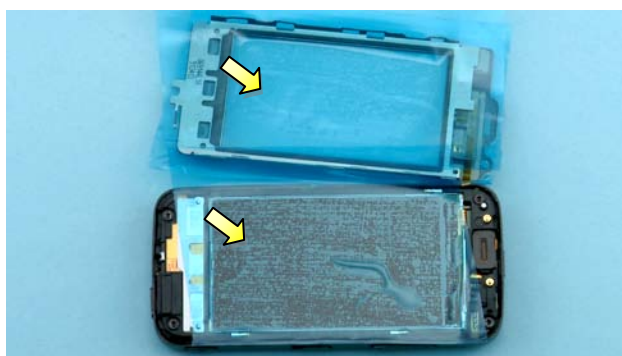
7) Protect the TOUCH WINDOW ASSEMBLY with protective film.



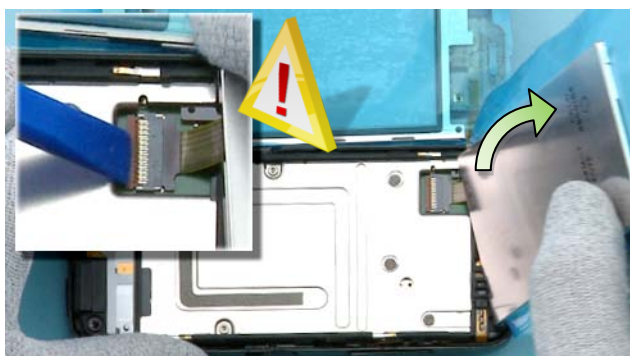
8) Use the dental tool to carefully release the clips holding the TOUCH WINDOW ASSEMBLY.



9) Turn the TOUCH WINDOW ASSEMBLY next to the phone.



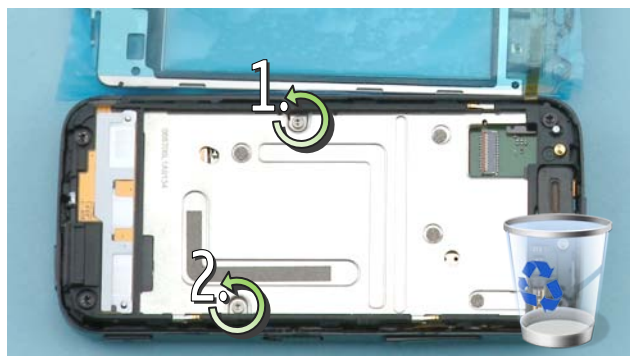
10) Protect the inner side of the TOUCH WINDOW ASSEMBLY and the LCD with protective film.



11) Turn the LCD over to gain access to the LCD connector. Then use the SS-93 to unlock the locking mechanism of the LCD connector. While opening the connector, be careful to not to damage the connector!



12) Carefully disconnect the LCD connector and remove the LCD.



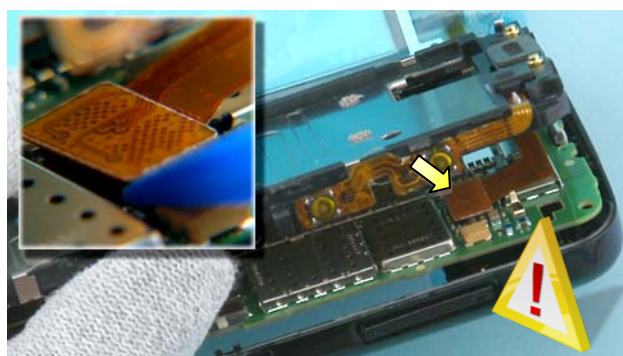
13) Unscrew the two TORX+ size 4 screws in the order shown. Do not use them again.



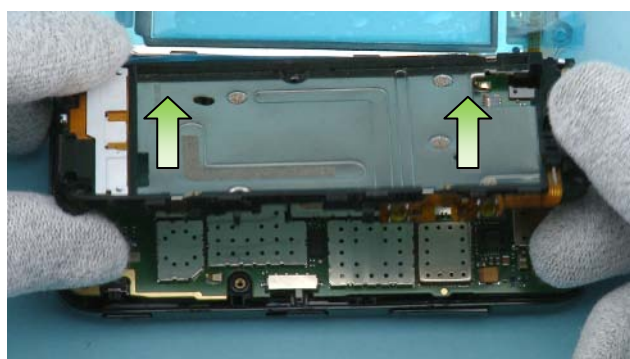
14) Then unscrew these four TORX+ size 6 screws in the order shown. Do not use them again.



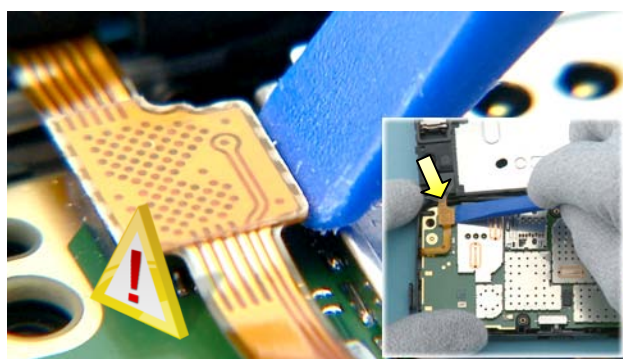
15) Use the SS-93 to carefully lift up the UI DECK to gain access to the upper flex connector.



16) Disconnect the UPPER FLEX from the engine board with the SS-93. While opening the connector, be careful to not to damage the connector - or components nearby!

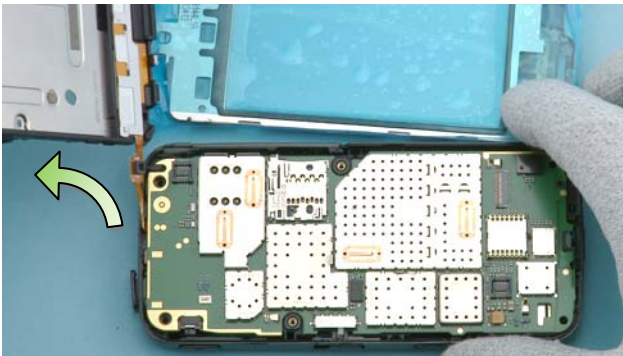


17) Lift the UI DECK and place it on top of the TOUCH WINDOW ASSEMBLY.

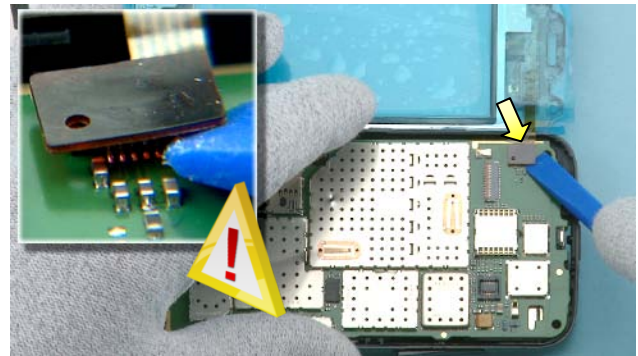


18) Use the SS-93 to disconnect the UI FLEX ASSY from the engine board. While opening the connector, be careful to not to damage it!

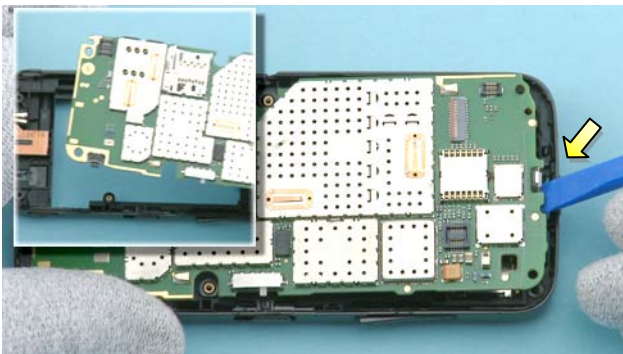




19) Turn the UI DECK over.



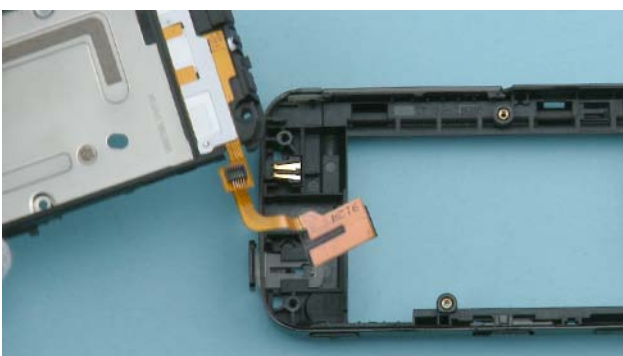
20) Open the TOUCH WINDOW ASSEMBLY connector with the SS-93. Be careful with the components around the connector! The TOUCH WINDOW ASSEMBLY can now be removed. **NOTE: If the TOUCH WINDOW ASSEMBLY is not faulty or damaged, it can be used again. If either the TOUCH WINDOW ASSEMBLY or the TOUCH WINDOW SUPPORT PLATE ASSEMBLY is faulty or damaged, both parts must be changed.**



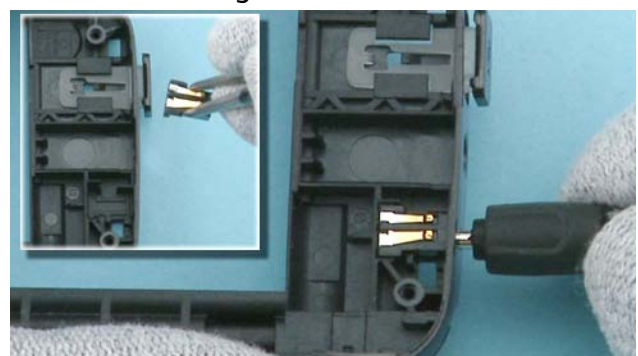
21) Use the SS-93 to lift up the LIGHT SWAP PWB and remove it.



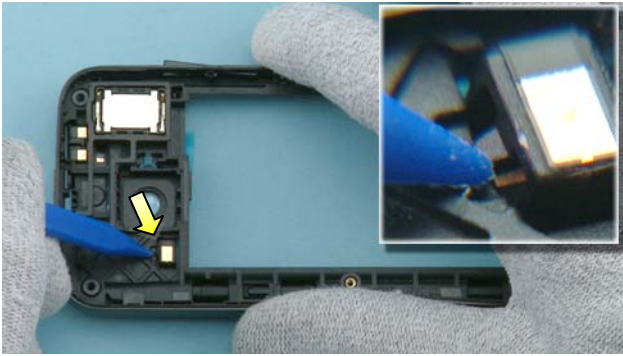
22) Push out the audio connector with the AV plug. Be careful not to damage the audio connector while releasing it - or the flex soldering! Avoid pulling the flex while detaching the AV connector!



23) The UI Deck can be taken away.



24) Use the charger plug to detach the DC jack from C-COVER ASSY. Remove the DC jack with the tweezers.



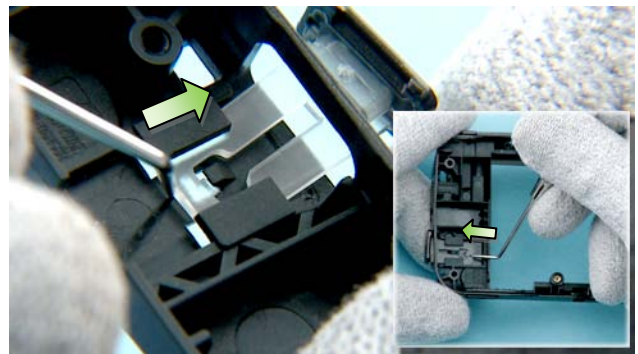
25) Use the sharp end of the SS-93 to release the clip holding the ANTENNA ASSEMBLY.



26) Turn the C-COVER over and detach the ANTENNA ASSEMBLY.



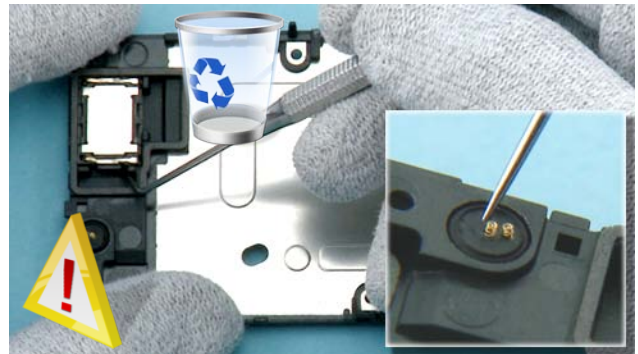
27) Use the dental tool to release the IHF SPEAKER and remove it with the tweezers. Be careful not to damage the IHF gasket! The speaker and the speaker adhesive cannot be reused.



28) Push the end of the USB DOOR with the dental tool as shown.

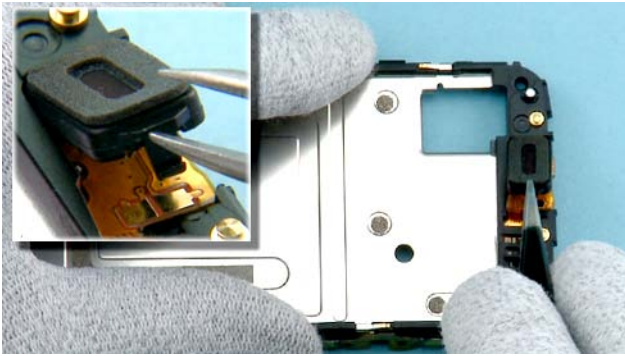


29) Turn the C-cover over. Push the clip with the dental tool and keep the clip pressed while pulling the door out.

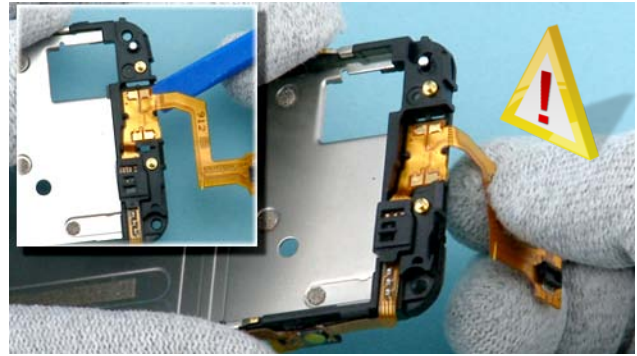


30) Use the dental tool to release the IHF SPEAKER. Be careful not to damage the IHF gasket! The speaker and the speaker adhesive cannot be reused. Also remove the MICROPHONE with the dental tool.

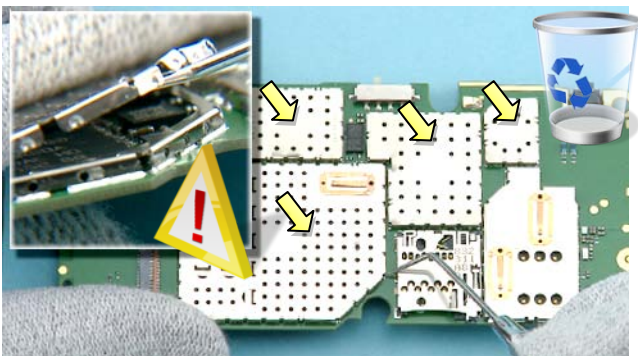




31) Use the tweezers to lever out the EARPIECE ASSEMBLY.



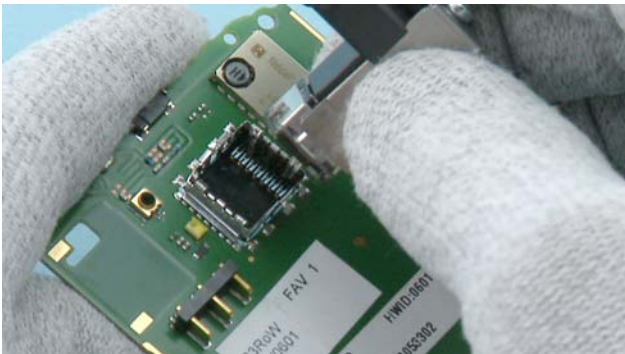
32) Bend the UPPER FLEX AND BOOT ASSY as shown and then use the SS-93 to detach the flex from the deck.  
Be careful not to damage the flex!



33) Use the dental tool to carefully lever out the RF 2, BB, BW and the FM SHIELD LIDS. These lids cannot be used again.



34) Remove also the LNA SHIELD LID from the bottom side of the engine board.



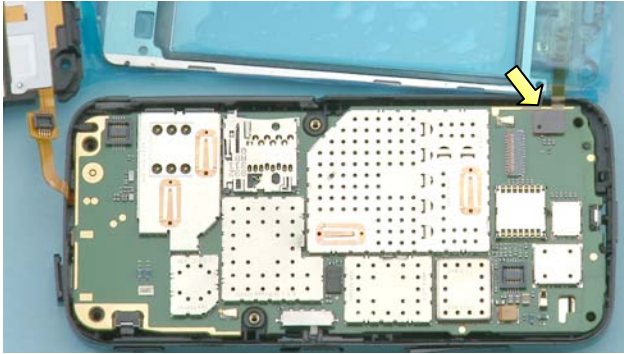
35) Place the camera removal tool SS-210 on top of the camera. Press down carefully the black plastic parts of the SS-210. Then press down the metal sheets. Press the metal plates from the sides to tighten them to camera. Lift up the SS-210 - and remove the CAMERA.



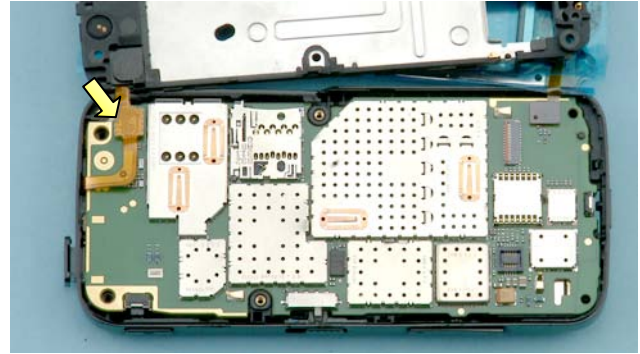
36) Nokia 5530 XpressMusic disassembly is now complete.

-END OF DISASSEMBLY-

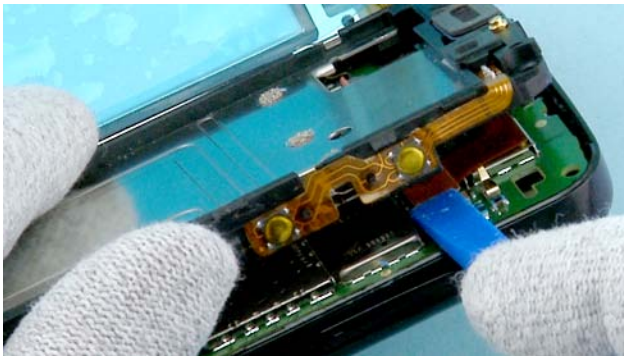
## 11. ASSEMBLY HINTS



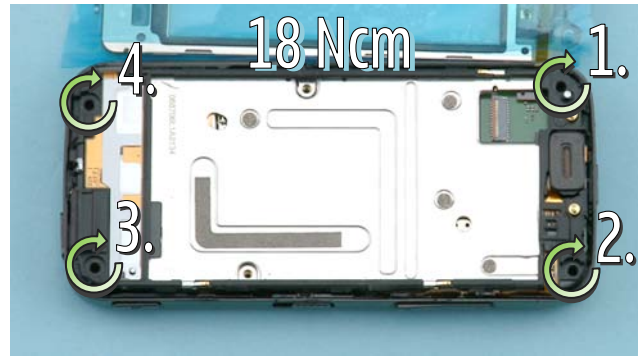
1) Connect the TOUCH WINDOW ASSEMBLY to the engine board.



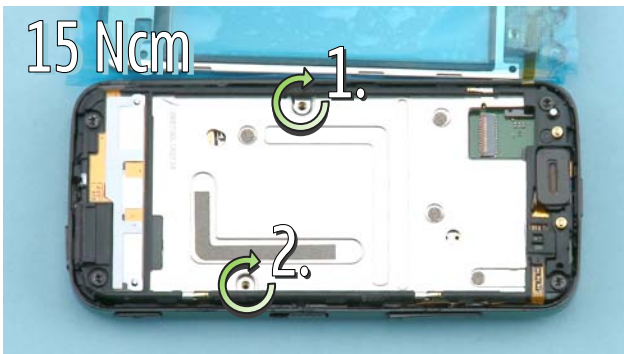
2) Then connect the UI DECK ASSEMBLY to the engine board.



3) Place the UI DECK over the engine board and connect the UPPER FLEX.

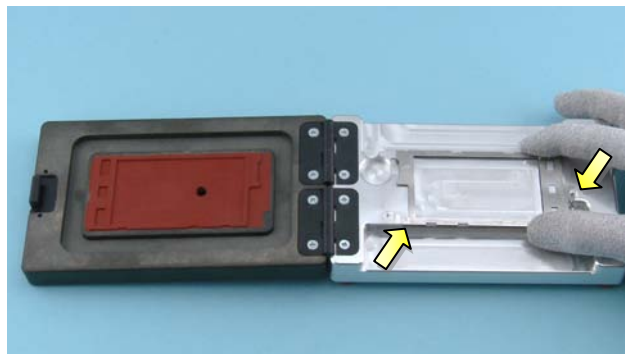


4) Tighten the four TORX + size 6 screws to the torque of 18 Ncm in the order shown.



5) Tighten the two TORX + size 4 screws to the torque of 15 Ncm in the order shown.

TOUCH WINDOW SUPPORT PLATE ASSEMBLY and  
TOUCH WINDOW ASSEMBLY using the SS-214



1) Open the SS-214. Use the guiding on top and bottom side to position the TOUCH WINDOW SUPPORT PLATE ASSEMBLY correctly into the SS-214. Then remove the protective film from the assembly.



2) Remove protective film from the TOUCH WINDOW ASSEMBLY before placing the assembly. Use the guiding on bottom side to position the assembly correctly.



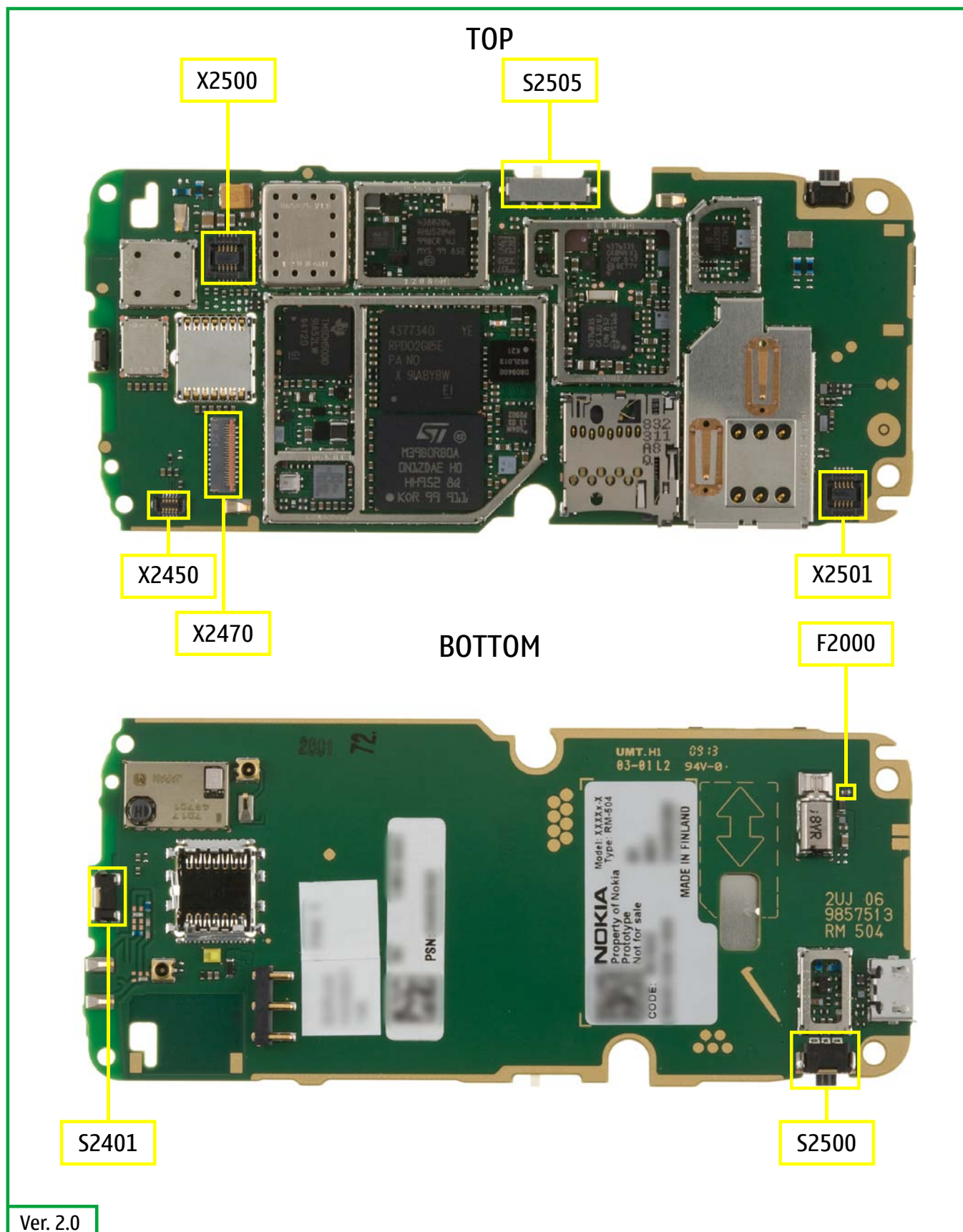
3) Then place the top side of the TOUCH WINDOW ASSEMBLY using the guide of the SS-214.



4) Close the SS-214 and keep it closed at least 3 seconds to activate the adhesive.



## 12. SOLDER COMPONENTS



Ver. 2.0